

TTA-PCT-2 CON

FWC of U.S. Serial No. 07/983,848

Unit No.: 2507

- E3
conc'd
- 1 32. (Newly added) A magnifying observation apparatus
2 according to Claim 28, wherein the image pick-up apparatus
3 is connected to the monitor by a wire that transmits
4 information from the imaging device to the monitor. 4

REMARKS

Favorable consideration of this application is respectfully requested in view of the foregoing amendment and the following remarks. By the foregoing amendment, claims 1 and 7 have been amended and new claims 11-32 have been added. Thus, claims 1-32 are currently pending.

At the outset, applicants wish to thank Examiner Robbins for the courtesies extended during an interview that was conducted on November 3, 1994, in connection with this application. During that interview, the present invention was demonstrated and the prior art and claims (including claims corresponding to those added herewith) were discussed. The arguments advanced during the interview are repeated and supplemented below.

To begin with, it was agreed that the present invention is very different from a video camera. Thus, it was agreed that

TTA-PCT-2 CON

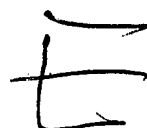
FWC of U.S. Serial No. 07/983,848
Unit No.: 2507

the present invention can be distinguished from the prior art previously applied subject to an agreement regarding the breadth of claim protection. For reasons explained in detail below, applicants submit that the claims currently pending distinguish from the prior art of record.

During the interview, the Examiner also raised the possibility that, although the present invention is obviously very different from a bar code reader, certain of the claims presented might be broad enough to read on certain hand-held bar code readers. The Examiner supplied a copy of U.S. Patent No. 4,181,847 to Hara et al. to applicants' representative. The Examiner indicated that he would consider this issue and review patents relating to bar code readers. In the meantime, the Examiner requested that applicants address the issue of whether the claims are broad enough to read on a bar code reader.

In that regard, applicants respectfully submit that all of the claims as drafted distinguish from bar code readers such as that described in U.S. Patent No. 4,818,847 to Hara et al.

The claims of this application define the invention as a magnifying observation apparatus that includes an image pickup apparatus for reproducing an image of an object onto a monitor display. This definition of the invention distinguishes the present invention from bar code readers. The purpose of a bar

A handwritten mark, possibly a signature or initials, consisting of a stylized 'E' or 'F' shape with a horizontal line through it.

TTA-PCT-2 CON

FWC of U.S. Serial No. 07/983,848

Unit No.: 2507

code reader is to interpret a machine-readable code, not to reproduce that code onto a monitor display. Moreover, there is no conceivable reason for displaying a bar code onto a monitor, since the bar code itself is essentially unreadable by humans. In addition, bar code readers such as that disclosed by Hara et al. are not intended to reproduce an image of the entire bar code, but instead are merely intended to reflect an image on the image sensor that has a light density distribution that corresponds to the bar code. For these reasons, applicants submit that bar code readers are fundamentally different from magnifying observation apparatus of the present invention and are irrelevant to the patentability of the claims of this application.

In addition, there are certain structural differences that follow from the fundamental difference between a bar code reader and a magnifying observation apparatus according to the present invention. For example, in a magnifying observation apparatus according to the present invention, a control circuit emits a video signal that can be displayed on a monitor. (Note claims 1 and 22.) Applicants are not aware of any bar code reader that emits a video signal. Hara et al. certainly does not disclose such structure.

TTA-PCT-2 CON

FWC of U.S. Serial No. 07/983,848

Unit No.: 2507

There are also significant differences between the optical systems employed in bar code readers and magnifying observation apparatuses. The bar code reader disclosed in Hara et al. includes a single lens 7, and certainly does not contemplate any type of zoom feature (as called for in claim 6, for example). Also, the bar code reader disclosed by Hara does not include a control circuit of the type claimed within the casing.

For all of these reasons, applicants submit that prior art relating to bar code readers is irrelevant to the issue of the patentability of the presently pending claims. Even if such prior art were considered analogous, however, the claims distinguish from that prior art by requiring a magnifying observation apparatus that includes an image pickup apparatus for reproducing an image of an object onto a monitor display. This is neither disclosed nor suggested by Hara et al.

Turning now to the rejections made in the parent application, applicants submit that the currently pending claims clearly distinguish from the prior art previously applied.

The Examiner will recall that, in the parent application, the claims were rejected as unpatentable over various combinations of the following five U.S. patents: U.S. Patent No. 4,881,128 to Yamada; U.S. Patent No. 4,176,923 to

TTA-PCT-2 CON

FWC of U.S. Serial No. 07/983,848
Unit No.: 2507

Young et al.; U.S. Patent No. 3,621,131 to Wolff; U.S. Patent No. 3,625,607 to Bravenec; U.S. Patent No. 3,877,793 to Nakagawa. In all cases, U.S. Patent No. 4,881,128 to Yamada was the primary reference. Yamada, of course, relates to a video camera. As mentioned above, it was agreed at the interview that the present invention is "completely different" from a video camera.

The claims currently pending clearly define a structure that could not possibly be suggested by prior art relating to a video camera.

In particular, the present invention is similar to a microscope, but does not require a separately prepared sample and does not require a stand. Thus, the present invention is highly portable and can be used anywhere. There are at least three important features of the present invention that distinguish this type of device from any video camera. To begin with, the focus point of the optical system is always proximate the image pickup device (note Fig. 12 in this regard). The reason for this is simple, the device is intended to be used by being placed in contact or nearly in contact with the object to be observed. Video cameras are, of course, quite different. In a video camera the object to be filmed is not ordinarily in contact with or immediately proximate to the lens.

TTA-PCT-2 CON

FWC of U.S. Serial No. 07/983,848

Unit No.: 2507

Secondly, the present invention discloses a zooming structure in which the CCD or image device can move in coordination with the lens (note Fig. 12). There is no reason to provide such a structure in a video camera because the object to be filmed is not in a fixed location.

Finally, because the image pickup apparatus is placed very near the object to be observed, the source of lighting must be provided within the casing. This source of lighting can be either optical fibers or, preferably, a separate lamp. But in each case the light source is within the casing. In a video camera, on the other hand, there is no reason to provide a light source within the casing because the object to be filmed is always a significant distance from the lens. Even when separate lighting is used in connection with the video camera, it always illuminates an area that is some distance from the lens.

Taking the foregoing fundamental differences into account, it follows that there are several significant features of the present invention. To begin with, the present invention provides a removable, easily replaceable lamp structure. This distinguishes from constructions that provide optical fibers. Moreover, the present invention provides a light source,

TTA-PCT-2 CON

FWC of U.S. Serial No. 07/983,848

Unit No.: 2507

preferably the lamp structure, within the casing. The present invention also has a very small size in which the control circuit is contained within the casing so that the unit is very compact and easy to operate. In addition, the optical system of the present invention is constructed to focus on an image that is at or near a viewing hole provided in the casing. This plainly distinguishes from any sort of video camera. The present invention also provides for the possibility of adjusting the optical system for magnification. This can be done by moving the objective lens alone or moving the objective lens in connection with the CCD (imaging device).

The newly added claims 11-32 each define the present invention as a magnifying observation apparatus that includes at least one of these distinguishing features. Accordingly, these claims are allowable.

Moreover, applicants submit that all of the previously rejected independent claims now plainly distinguish the present invention from the prior art of record as follows:

With regard to claim 1, Yamada discloses a video camera, not a magnifying observation apparatus. Thus, the fundamental distinctions apply to negate any possibility of

TTA-PCT-2 CON

FWC of U.S. Serial No. 07/983,848

Unit No.: 2507

obviousness. Yamada does not disclose a light source within the casing, nor does he disclose a separate lamp. Yamada also fails to disclose a case that is essentially one-handed graspable size.

As for claim 6, applicants note again, Yamada discloses a video camera, not a magnifying observation apparatus. Thus, the fundamental distinctions apply to negate any possibility of obviousness. The use of a movable image sensor (CCD) could not be obvious in a video camera.

As for claim 7, applicants note that Yamada and Young et al. both disclose video cameras, not a magnifying observation apparatus. Thus, the fundamental distinctions apply to negate any possibility of obviousness. Neither Young et al. nor Yamada disclose a light source within the casing. In Young et al., the separate lamp is on top of the camera.

For at least these reasons, it is respectfully submitted that all of the currently pending claims are allowable and that this application is now in condition for allowance. Applicants therefore respectfully request prompt issuance of a Notice of Allowance.

Should the Examiner determine that any further action is necessary to place this application into even better form, he is encouraged to telephone applicants' representative at the

TTA-PCT-2 CON

FWC of U.S. Serial No. 07/983,848

Unit No.: 2507


number listed below pursuant to the understanding reached during
the interview.

Respectfully submitted,

MASAO YAMAMOTO, ET AL.

Date: November 7, 1994

By:


Michael D. Bednarek
Registration No. 32,329

MARKS & MURASE
Suite 750
2001 L Street, N.W.
Washington, D.C. 20036
(202) 955-4900